

PATENT

-1-

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Minna Hovinen et al.

Application No.: NEW

Filed: HEREWITH

For: METHOD FOR DETERMINING ION  
CONCENTRATION AND ENERGY OF  
SHALLOW JUNCTION IMPLANTS

Group Art Unit: Unknown

Examiner: Unknown

**INFORMATION DISCLOSURE  
STATEMENT**121 Spear Street, Suite 290  
San Francisco, CA 94105  
(415) 512-1312M/S PATENT APPLICATION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant(s) submit(s) herewith patents, publications or other information [attached hereto and listed on the attached Form PTO-1449 (modified)] of which they are aware, which they believe(s) may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

This Information Disclosure Statement:

- (a) ☒ accompanies the new patent application submitted herewith. 37 CFR § 1.97(a).
- (b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491.
- (c) ☐ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits, or before a first office action after filing a Request for Continued Examination under §1.114.
- (d) ☐ is filed after the first office action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a

Atty Docket No.: TWI-12730

notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180) set forth in 37 CFR § 1.17(p) or a certification as specified in 37 CFR § 1.97(e), as checked below.

- (e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and the Issue Fee has not been paid, and is accompanied by the fee (\$130) set forth in 37 CFR § 1.17(i)(1) and a certification as specified in 37 CFR § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the information disclosure statement.

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR § 1.97(e) may need to be completed.] The undersigned certifies that:

- (f) ☐ Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- (g) ☐ No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this information disclosure statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 (Modified) is supplied herewith, except as noted below.

Those patent(s) or publication(s) which are marked with an asterisk (\*) in the attached form PTO-1449 (Modified) are not supplied because they are (a) either U.S. Patents and this an application filed after June 30, 2003, or (b) were previously cited by or submitted to the Office in a prior application no. 10/341,225, filed January 13, 2003, and 09/884,262, filed June 19, 2001, and relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

A concise explanation of relevance of the items listed on form PTO-1449 (Modified) is:

- (k) ☒ not given
- (l) ☐ given for each listed item

- (m) ☐ given for only non-English language listed item(s) [Required]  
(n) ☐ is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references [copy attached].

The Examiner is reminded that a "concise explanation of the relevance" of the submitted items "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP § 609.

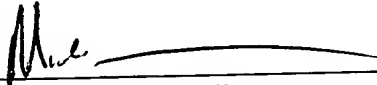
While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR § 1.98 and MPEP § 609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

STALLMAN & POLLOCK LLP

Dated: October 20, 2003

By:   
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Attorneys for Applicant(s)

<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>	<b>Docket Number (Optional)</b> <b>TWI-12730</b>	<b>Application Number</b> <b>NEW</b>
	<b>Applicant(s)</b> <b>Minna Hovinen et al.</b>	
	<b>Filing Date</b> <b>HEREWITH</b>	<b>Group Art Unit</b> <b>Unknown</b>

### U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	*AA	4,522,510	06/11/1985	Rosencwaig et al.	374	7	04/01/1983
	*AB	4,636,088	01/13/1987	Rosencwaig et al.	374	5	05/21/1984
	*AC	4,710,030	12/01/1987	Tauc et al.	356	432	05/17/1985
	*AD	4,854,710	08/08/1989	Opsal et al.	356	432	07/23/1987
	*AE	4,999,014	03/12/1991	Gold et al.	356	382	05/04/1989
	*AF	5,074,669	12/24/1991	Opsal	356	445	12/12/1989
	*AG	5,181,080	01/19/1993	Fanton et al.	356	381	12/23/1991
	*AH	5,298,970	03/29/1994	Takamatsu et al.	356	349	10/01/1992
	*AI	5,973,787	10/26/1999	Aspnes et al.	356	369	05/12/1998
	*AJ	5,978,074	11/02/1999	Opsal et al.	356	72	07/03/1997
	*AK	6,052,188	04/18/2000	Fluckiger et al.	356	369	07/08/1998
	*AL	6,081,330	06/27/2000	Nelson et al.	356	318	09/18/1998
	*AM	6,268,916	07/31/2001	Lee et al.	356	369	05/11/1999
	*AN	6,512,815	01/28/2003	Opsal et al.	378	89	05/06/2002
	*AO	6,535,285	03/18/2003	Opsal et al.	356	369	02/08/2000

### FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	*AP	WO 99/02970	01/21/1999	PCT	G01N	21/21		
	*AQ	WO 00/68656	11/16/2000	PCT	G01J	4/00		

### OTHER DOCUMENTS

*(Including Author, Title, Date, Pertinent Pages, Etc.)*

	*AR	L. Zhou et al., "Use of a New Thermal Wave Technology for Ultra-Shallow Junction Implant Monitoring," <i>Proceedings of the X International Conference on Ion Implantation Technology</i> , June 1998, Kyoto (Japan), pp. 1-4.
	*AS	A. Salnick et al., "Quantitative Photothermal Characterization of Ion-Implanted Layers in Si," <i>25th Review of Progress in QNDE</i> , Snowbird (Utah), July 19-24, 1998, pp. 1-15.
	*AT	U.S. Patent Application No. 09/499,974, filed February 8, 2000, entitled "Combination Thermal Wave and Optical Spectroscopy Measurement System," (5 drawing pages included) by Jon Opsal et al., 29 pages in length.

<b>Examiner</b>	<b>Date Considered</b>
<b>Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</b>	